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Nomic Necessity for Platonists

Penultimate Draft, Matthew Tugby

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After identifying some existing explanations offered by nomic necessitarians for the alleged necessary connections between natural properties and their dispositional or nomic features, I discuss a less explored necessitarian strategy. This strategy is available to Platonists who hold that properties exist necessarily.

1. Introduction: contingentism versus necessitarianism about laws

At the heart of the quidditist view of natural properties held by Armstrong (1983) and Lewis (2009) is the claim that properties play their dispositional or nomic roles contingently. Armstrong claims that, *prima facie*, this contingentist view has more plausibility than the opposing necessitarian approach because ‘in trying to discover the laws of nature, scientists feel free to consider possibilities in a very wide-ranging manner, quite unlike the constraints which naturally suggest themselves in logical and mathematical argument’ (1983, p. 158). Given that scientific practice gives this impression of contingency, those who assert that natural laws are metaphysically necessary had better have a story to tell regarding the source of this necessity, urges Armstrong. Merely positing inexplicable necessary connections will not convince.

In recent years, necessitarians have tried to meet this challenge and a common strategy has been to propose that the source of the metaphysical necessity of natural laws lies in the fact that properties are *exhausted* by their dispositional or nomic roles.¹ This is the dispositional monist or ‘powers’ view (see,

¹ Note that Bird (2007, § 3.1 and 3.2) distinguishes between a strong necessitarianism on which laws exist in all possible worlds, as argued by Bostock (2003), and a weaker version which says that while the same laws necessarily apply to a property in any world where it exists, those laws do not exist in worlds where that property is absent. Bird (2007, p. 58, fn. 60) has reservations about Bostock’s argument for strong necessitarianism and so does not commit

for example, Bird 2007 and Mumford 2004). Dispositional monism entails the rejection of nomic contingentism because if a property *just is* a certain disposition to causally behave in a certain way, then instantiations of that same property in other worlds will always bestow the same sorts of causal powers.

Unfortunately, though, dispositional monism has faced criticisms from many quarters (see, for example, Psillos 2006 and Jacobs 2011, §. 2), and this has led some to accept that while properties do bestow dispositions upon their possessors, there must be something more than this to a property, such as a categorical or qualitative reality. This is sometimes called the ‘dual-aspect’ or ‘identity’ view (see, for example, Heil 2003, ch. 11, Jacobs 2011, and Martin 2008, ch. 6). Obviously, if nomic necessitarianism is to be preserved on this view, the relationship between the qualitative and dispositional aspects of a property had better be one of necessity. And in accordance with the Armstrongian constraint above, the necessitarians had better have an explanation regarding the metaphysical source of this alleged necessity.

As I have discussed the case against dispositional monism elsewhere (reference removed), I will not discuss it further here. Rather, my aim in this paper is to consider what kind of explanation could be available to a dual aspect theorist regarding the aforementioned necessary connections.

To be fair, Jacobs (2011) has recently tried to shed light on Martin and Heil’s version of this view by utilising the notion of truthmaking relations (see also Tugby 2012). According to Jacobs, their view is best understood as the view that properties are qualities (or what he calls ‘thick quiddities’) that have a nature sufficient to be the truthmakers for counterfactuals concerning the objects instantiating them, counterfactuals which in turn fix the associated dispositional and nomic facts (2011, §. 4). Would someone like Armstrong find this story convincing? I do not think so. While Jacobs’ truthmaking account does help to clarify the Martin-Heil view, the problem is that in order to posit the truthmaking relation in question, one already has to believe that the relationship between qualities and modal facts is one of necessity, given that this is what truthmaking involves. But as a contingentist, Armstrong simply rejects

to it. However, Bird then briefly indicates that a Platonic conception of properties would provide him with an alternative route to necessitarianism of the strong variety (*ibid.*). Our aim below is to explore this suggestion.

the necessitation intuition and, by extension, this truthmaking claim. What is needed, then, is an account of why qualitative properties are of a kind such that they are truthmakers for modal facts. And unfortunately, it is not clear that anything very illuminating can be said at this point. Indeed, in answer to the question ‘Why is this quality, this thick quiddity, sufficient to make true this counterfactual?’ all that Jacobs says is that ‘... the thick quiddity is the thick quiddity that it is (and not some other) and the counterfactual is the counterfactual that it is (and not some other)’ (2011, §. 4).²

In the remainder of this paper we will explore an alternative necessitarian strategy that does not rely on the notion of truthmaking, one available to those who view qualitative properties as Platonic (i.e., transcendent) entities which can exist uninstantiated and which exist necessarily. It will be proposed that because of the sorts of reasons that lead many Platonists to think that properties exist necessarily, those Platonists should also hold that the (second-order) relations between those properties are necessary, which includes those constituting their dispositional or nomic features.³ Interestingly, there is a little-discussed footnote in Armstrong’s 1983 where precisely this kind of strategy is considered. Armstrong writes:

Given that universals are necessary beings, does it follow that their irreducible relations, and so the laws of nature, are necessary? One might invoke the principle: if the terms of a relation involve nothing but necessary beings, then the relation itself must hold necessarily 1983, p. 164.

Armstrong then admits that the principle ‘has some plausibly’ (*ibid.*), but does not know how to give a positive argument for the principle. Our aim now is to return to this question in a Platonic context.

² For related objections to this truthmaking strategy, see Barker forthcoming, §. 6.

³ I take it that most Platonists would view laws as real (second-order) relations obtaining between properties, as Armstrong himself does. The main alternative would be the regularity view of laws, according to which laws consist in nothing more than first-order causal regularities between concrete particulars or events. But given that the regularity view is typically associated with empiricist views, such as those influenced by Hume (see Lewis 1973, p. 73, for a sophisticated version), the marriage of Platonism with a regularity view would be an unusual one.

2. The Platonic necessitarian strategy

The central commitment of Platonism is that properties exist in a transcendent realm of being which is independent of the spatiotemporal realm. An implication of this is that properties can neither be created nor destroyed (more on this below) and also that they can exist uninstantiated. In other words, Platonic properties are ways concrete things can be rather than just ways things are, and as a result are typically assumed to be necessary existents (for examples of those who associate Platonism with the necessary existence of properties, see Armstrong 1983, p. 125, Bird 2007, p. 64, Bostock 2003, p.518, Cowling forthcoming, §. 4, Oderberg 2011, p. 7, and Tugby forthcoming, §. 5).⁴

Of course, Platonists do then disagree on the precise details regarding the nature of properties. In the course of illustrating the argument below, I will focus on one of the most recent and innovative versions of Platonism, namely, Cowling's locationism (forthcoming).⁵ But the general argument to be made applies to other versions of Platonism as well, *mutatis mutandis*. The key point for our purposes is just that, like many other Platonists, Cowling accepts that properties are necessary existents.

Locationism's core assertion is that reality includes abstract qualitative dimensions as well as spatiotemporal dimensions, and that qualitative properties are points or regions on the qualitative dimensions.⁶ Moreover, just as spacetime has an intrinsic structure (for example, topological or metrical features), so too does the abstract space of properties. To use Cowling's example, the structure of the 'mass' dimension will be determined by a metric function that fixes how far apart and how similar

⁴ Tooley (1987, p. 119) appears to be an exception.

⁵ Another reason for focusing on Cowling's view is that he seems to lean towards quidditism when, in one place, a quidditist worry concerning the Aristotelian approach to properties is appealed to (forthcoming, §.4). If Cowling has the Armstrong-Lewis type quidditism in mind here, then, for reasons below, he should revise this aspect of his view.

⁶ As Cowling points out, the locationist has some choices to make regarding how, precisely, quality points are to be understood. For example, one might identify individual quality points with individual sparse properties. Or, alternatively, one might associate individual quality points with 'total qualitative ways' for things to be (forthcoming, §.2), in which case the point properties will be more coarse-grained.

different determinate mass locations are (Cowling forthcoming, §.5). As well as similarity relations, the structure of quality space can also be used to underpin other second-order relations between properties, such as their nomic relations, which determine which properties are compatible (co-instantiable) with which, which properties are excluded by which, which properties are causally related to which, and so on.

Why is locationism a Platonic view? Well, if the qualitative dimensions form their own intrinsic structure, one that is independent of the spatiotemporal realm, then regions of that structure exist even if no objects occupy those regions, just as regions of spacetime can exist unoccupied on broadly substantivalist conceptions (Cowling forthcoming, §. 1). Given that qualitative properties are points or regions in this independent quality space, it follows that properties can exist uninstantiated on this view.⁷

What, then, would the nomic contingentist thesis look like on this picture? Well, given that properties are associated with points in quality space, the contingency thesis can be understood as entailing the possibility of those points swapping their positions in that space. To illustrate, it seems contingentism would entail the possibility of worlds in which the quality point lying at ‘two grams’ on the mass dimension in our world permutes with the point located at ‘two million grams’. By swapping their locations in this way, the properties at these worlds would bear new second-order relations to the other locations in quality space, including any associated similarity and nomic relations. The point which permutes into the ‘two million grams’ position would now be closer to the ‘having two million and one grams’ location, for example, and so things instantiating that point would behave differently.

Of course, implicit in this contingentist story is the assumption that quality points are not identical, or are at least merely contingently identical, with locations in quality space. But given the close analogy drawn between locationism and substantivalism, it is not immediately clear that this assumption is

⁷ If Platonism were rejected by the locationist, then unless all possible properties are actually instantiated, the quality space would be ‘gappy’. But if a dimension of quality space had a gappy topology or metric, in virtue of what could we say that the resulting fragments were part of a common dimension, rather than different dimensions altogether? Without a continuous and independent metric to unite the fragments, it is hard to see what the answer could be.

especially problematic. This is because according to some interpretations, substantivalism itself is committed to the claim that spacetime points are permutable and so have their locations in spacetime contingently (see Earman and Norton 1987 on diffeomorphism). On this picture spacetime structure can survive the swapping of spacetime points because there is said to be more to spacetime than its spacetime points: the metric field appealed to in General Relativity, for example, imposes spacetime structure.

How, then, can the necessitarians block this contingentist story in the case of quality space? Well, as we have seen, locationism is best understood as a Platonic view, a view on which quality space is abstract and non-spatiotemporal, and in which uninstantiated properties exist. And given this independence, Platonic properties are typically taken to exist necessarily. Indeed, Cowling himself acknowledges that ‘all properties are in fact necessary existents’, given their Platonic nature (forthcoming, §. 4). But for the same reasons that Cowling and others think Platonic entities exist necessarily, shouldn’t they also be inclined to think that the second-order features of such properties (in the current case, quality points) also hold necessarily? I suggest they should, on pain of undermining their Platonic commitments.

The kind of argument that is typically invoked for the necessary existence of transcendent properties is that they are, like Platonic numbers, immutable in the strongest sense: they cannot come to be and cannot pass away, because they stand outside of the concrete, spatial realm. In order to motivate this immutability claim, current physics is also sometimes appealed to, namely, the Einsteinian unification of space and time. When discussing Platonic entities, for example, Berman writes:

Spacetime unification rules out entities which can change but are not located in space. Change requires a temporal dimension. The unity of spacetime, therefore, rules out all theories which commit themselves to non-spatially located concepts that can change 2008, p. 230.

Berman makes a further clarification, which is that this kind of immutability includes the impossibility of creation or destruction (*ibid.*). This is important for our purposes, because on some understandings of immutability, it is far from clear that this feature would provide an argument for necessity. For example,

imagine that a concrete particle was created by God and placed in an isolated corner of the universe such that it was outside the light cone of any other entities. Suppose also that the particle had no power to change any of its intrinsic or relational properties. Clearly, such a particle would, in a certain sense, be immutable, even though it would plausibly be a contingent existent. The case is different in the Platonic case, however. Platonic entities are, unlike the concrete particle, also immutable in the sense that they can be neither created nor destroyed, given that they stand outside of the temporal realm. And given that being a contingent entity plausibly involves being dependent on something else for its existence, or capable of being taken out of existence, Platonic properties are viewed as non-contingent entities.⁸

I will not develop the Platonic argument for the necessary existence of properties in any more detail here. The important point for current purposes is that insofar as Platonism offers reasons for thinking that properties exist necessarily, those same reasons should also support the claim that the relational facts concerning properties are metaphysically necessary. If, for example, all aspects of the locationist's quality space are located in the Platonic realm, then surely all of those facts will be 'fixed for good' in the same way that the quality points' existence is, including facts about where the quality points are positioned within that quality structure. Insofar as Platonic properties exist necessarily, surely their relational features do as well, given that those relations are also Platonic in nature.⁹ Note, however, that this argument leaves unaffected the thesis present in some versions of substantivalism that *spacetime* points are permutable, which is as it should be given that our argument concerns only the Platonic realm.

⁸ This view of metaphysical contingency has some important implications. As (name removed) has pointed out to me, since it appears logically possible for properties to cease to exist, the appearance of logical possibility turns out to be pretty useless when it comes to saying how a world could be metaphysically. I can only report here that this consequence strikes me as plausible: given that logic is traditionally supposed to be neutral as regards matters of fact and real existence, we should not be surprised if logic turns out to be neutral on what really is possible. See also van Inwagen (2001, pp. 247-8) who has related worries about the usefulness of so-called logical possibility.

⁹ Note that this means that quality points are not even contingently identical with their positions in quality space.

Some clarificatory points about this line of argument are in order. The argument is not relying on the implausible claim that all abstract states of affairs are necessary, in virtue of their abstractness. It is, rather, the *Platonic* nature of the abstracta in question which is doing the work. But that is not to say that all abstracta are Platonic in nature. Sets, for example, can be properly said to be abstract, but many sets are not Platonic entities, given that they have spatiotemporal, contingent entities as members. Another example: consider a version of presentism according to which past and future times are maximal sets of abstract facts, such as the abstract fact that the Battle of Hastings was in 1066. Plausibly, such a fact does not hold necessarily, since the Battle might have taken place at some other time. What this suggests is that these abstracta cannot be abstract in the Platonic sense. And this is as we should expect: the nature or content of the abstracta representing 1066 depends on what concretely took place in 1066 (for example, the spatiotemporal event of the Battle of Hastings taking place), and so these abstracta are, like many sets, dependent in some way on that which is spatiotemporal and contingent.

Finally, it should be emphasised that the above argument is not resting on the assertion that something's existing necessarily always entails that all of its features (in the current case, a quality point's relational features) exist necessarily. On Lewis's system, for example, properties exist necessarily in a certain sense, since they are construed as sets of concrete possibilia rather than just actual individuals (see for example Lewis, 1986, §. 1.5). Yet, on Lewis's view, it seems coherent to suppose that properties might be associated with different nomic roles (Lewis, 2009). What this serves to highlight, again, is that it is specifically the *Platonic* nature of quality space which is doing the work in the argument above. Importantly, while properties are necessary in a certain sense on Lewis's view, they are not Platonic given that they are sets with spatiotemporal constituents, i.e., concrete possibilia as members. In short, then, the kind of necessity principle which Armstrong finds plausible (p. 3 above) and which we have sought to motivate, has to be understood in the context of a thoroughgoing Platonic view of properties.

3. Conclusion

In conclusion, theories that accept nomic contingency while viewing properties as Platonic necessary existents are unstable. This is because the reasons typically offered for the necessary existence of Platonic properties also support the idea that the nomic relations between them are necessary (as well as any other second-order relations). So, if the view that properties are Platonic necessary existents is a defensible one, necessitarians have the explanatory story they are looking for regarding the source of nomic necessity.

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